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Issues in the Quality of Working Life

A series of occasional papers No. 3 December 1981

QWL-Current trends and directions

David Jenkins





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Publications

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QWL – Current trends and directions

David Jenkins

Ontario Ministry of Labour Ontario Quality of Working Life Centre Dr. Hans van Beinum Executive Director Reproduction rights of material from this paper should be negotiated directly with the author. For further copies of the paper and information related to QWL please contact the information service of the Ontario Quality of Working Life Centre.

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Background

In 1972 an international conference took place at Arden House, New York.

This conference was attended by about 60 people, mainly academics, and dealt with the practice and theory of the democratization of work. The timing was right, and the event was clearly a success: more than a decade of European and American experiences were pooled; the term 'quality of working life' was born; the International Council for the Quality of Working Life was established; and within a few years two important volumes of papers, edited by Louis Davis and Albert Cherns, were produced.

1972 became a punctuation point in the history of the quality of working life.

Since then many developments have taken place: conceptual ones, methodological ones, and, more significantly, developments in the actual practice of organizing and reorganizing work. Major innovative work has been undertaken, not only in Europe and North America, but also in other places of the world such as India and, particularly, Australia.

In 1980, some members of the International Council for the Quality of Working Life suggested that it was appropriate to have another international conference. Canada looked like the right place to host such an event. QWL developments in Canada were gaining momentum. Furthermore, it seemed that the Canadian environment could accommodate both the European and the U.S. traditions and developments.

About 30 representatives from labour, management, government and academia from across Canada were invited to a weekend meeting in Toronto in order to discuss the International Council's proposal. At this meeting the idea of a conference was warmly received and an organizing body for such a conference was struck. With the theme and the title 'QWL and the 80's', the first open international conference took place in Toronto in August, 1981. Some 1700 people attended of which 1000 were managers and more than 250 were union representatives.

The 1981 conference was clearly a re-punctuation point. A very significant development had taken place. The field had shifted. The Toronto conference demonstrated that QWL is no longer the exclusive concern of academics but is becoming more and more an issue of ongoing organizational reality.

This publication was inspired by this conference. We were fortunate that David Jenkins, for many years an observer, writer and participant in the QWL field, was able to attend the conference and willing to write this overview of the QWL scene. He has done so by discussing the conference in the wider context of the development of QWL, comparing presentations at the conference with experiences elsewhere and moving from European and North American perspectives back again into the discussions of the conference.

QWL is a living thing, a process. The Toronto conference was very much a living thing. So is this overview. David Jenkins has provided us with an informative and stimulating synthesis, one we believe will lead to further dialogue which will itself assist in sustaining and diffusing the experience of the Toronto conference.

Conference Co-ordinators QWL and the 80's/La QVT et les Années 80 Dr. Hans van Beinum Ontario Quality of Working Life Centre

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David Jenkins is an American, living in Europe since 1964. He writes and consults on matters related to industrial relations and QWL. In addition to writing several books around the subject (e.g. Job Power 1973), he also publishes a monthly newsletter, *The Jenkins Work Report*, which covers European industrial relations and QWL. Based in Paris, David Jenkins brings a journalist's wide ranging interests to this field with his unique experience of QWL in both North America and Europe.

1 Introduction

The following is a status report on activities, theories and results, as reflected in the 'QWL and the 80's' conference, held in Toronto, August 30 — September 3, 1981. This report summarizes some of the major themes, viewpoints, and questions raised by the speakers and participants at the conference, placed in the context of the events in the field during the recent past.

An unprecedented overview of the organization of work, its social, psychological, administrative and technical aspects — how it's done, what's wrong with it, how it could and should be done — was delivered to the 1,700 participants at the Toronto 'QWL and the 80's' conference.

By gathering together most of the leading authorities on the organization of work throughout the world, and presenting a representative sampling of virtually all types of activities in this field, the conference made available, in highly concentrated form, most of what is now known about the subject. It thus provided an opportunity to size up the major trends and currents and probable development over the coming years.

This brief report will focus on some highlights of the conference and, in so doing, supply a fast glimpse of the progress that has been made over the past several years. What follows is based on observations and comments made at the conference, against the perspective of the preceding several years of rapid development and change.

Terminology, doctrines and miscellaneous definitions First, a note on terminology. The official concern of the conference was the 'quality of working life' — a broad expression covering a vast variety of programs, techniques, theories, and management styles through which organizations and jobs are designed so as to grant workers more autonomy, responsibility, and authority than is usually done. To simplify somewhat, the general objective is to arrange organizations, management procedures, and jobs for the maximum utilization of individual talents and skills, in order to create more challenging and satisfying work and improve organizational effectiveness. The expression 'quality of working life' — or QWL — is sometimes used by various theorists to designate highly

specific sets of theories corresponding to certain philosophies or schools of thought — though different experts hold different opinions about what the correct doctrines are. Most OWL specialists, particularly in North America – feel that the integration of feedback from the persons affected by a system in its design and operation is a desirable and perhaps essential feature of OWL, and that 'participation' is an increasingly natural element of work organizations. Many theoreticians are interested in the finer gradations of meaning, but most outside observers - and, indeed, most practitioners – are not. As interest in the field has grown, QWL has come to be loosely used to cover a broad spectrum of activities in this area. Other terms used in roughly the same way include job design, organizational design, humanization of work, participative management, job reform, and work structuring. Disagreements on definitions continue to irritate and confuse. One specialist at the Toronto conference said of his company's human resources approach: "It is not talk about the quality of working life, but it is talk about the business at hand and who's responsible for managing it." On the whole, however, the above expressions are now employed as normal and acceptable generic terms.

It can be added that all these expressions are often extended to cover efforts to improve other aspects of workplace environments, such as ergonomics, noise, lighting, and health and safety.

2

A decade of change

It is only during the past ten years or so that QWL has become of sufficient significance as to be noticeable — and in some countries the time span has been a good deal less than that. Over that period of time, what changes have occurred, as became evident at the conference?

Most importantly, there has been an immense increase in the number of persons interested in the subject, one impressive demonstration being the number of participants at the Toronto conference. Only a few years ago the thought of organizing such an event would have seemed foolhardy, not to say useless. Previously, meetings on QWL had taken the form of small seminars or workshops, mainly aimed at initiating newcomers to the field, or moderately sized conferences designed for highly specialized professionals. The 1,700 participants at the Toronto conference comfortably exceeded the sponsors' expectations. Significantly, about 1,000 of these were managers, and another 250 were from unions. As nearly as can be determined, they felt the conference would assist them in their day-to-day work. Ten years ago, only a handful of managers, and virtually no unionists, would have seen knowledge of QWL as fitting even remotely into their work.*

QWL as a corporate value

The enthusiastic response to the conference is, of course, a consequence of the inclusion of QWL as a top-level management priority in a number of leading companies. Ten years ago (to make three examples of companies that this writer happened to come across at the time), AT&T and General Motors had small, semi-experimental QWL teams tucked away in obscure corners of the company bureaucracies — with little attention being paid to their activities — and Alcoa was just then in the early, hesitant stages of entering QWL. Today, job design and organizational improvement are seen as urgent and essential at AT&T and GM, and both companies have elicited the co-operation of unions in making sure the campaigns work. Alcoa has now designed several plants using

^{*}The conference also attracted about 50 consultants, 300 persons from universities, 100 from governmental agencies, and a scattering of representatives of private research institutes and other miscellaneous bodies.

QWL principles, and has reached agreement with unions on contractual specifications of the QWL objectives. More significantly, it is putting into place a new set of corporate goals which incorporate QWL thinking.

The seriousness with which these senior corporate managers take QWL is having a major effect on the thinking of smaller companies, constituting persuasive evidence that QWL is not merely one more fad, fashion, or empty management gizmo.

The role of a QWL consultant

The broadening of the field is also reflected in the variety of consultant services available. Ten years ago, there were almost no consultants outside a handful of universities and research institutes, either in Europe or America. Today, numerous highly competent independent consultants are available, with solid operating backgrounds in industrial companies that have pioneered in the QWL field. In fact, so hot is the demand for the too-small number of people with QWL expertise that companies have begun to experience some difficulty in holding together their internal consulting staffs. General Motors, for example, has recently lost a number of its people, so green have the pastures appeared elsewhere.

As practical experience in QWL has accumulated, valuable knowledge has been gained on the workings of the process, the results that may be expected and the common pitfalls that can be advantageously avoided. One useful lesson concerns the role of consultants. At one time, external consultants, who were, and who were perceived to be by those at the site where they were working, far better informed than their clients on the intricacies of their work, exercised excessive control over their projects, with the too-frequent result that when the consultant disappeared, so did the QWL project. Most external consultants now emphasize that the project, the new organization, the redesigned jobs, belong to those who are going to work in them — managers, supervisors and operators — and strive to disconnect themselves as soon as those on the spot are able to take command. One frequent recommendation is that an internal consulting resource be created.

Along similar lines, it is now widely recognized that over-protection of QWL projects can be counter-productive. Many companies, understandably cautious in dealing with unfamiliar ideas, start QWL activities in a small department, carefully shielded from other units so that the process will not be disrupted and so that its effects may be observed. This is probably unavoidable, but if it is exaggerated, as has happened, considerable friction is built up between the trial area and other departments, leading to criticism, rivalry, and envy of the 'pampered' unit being accorded special privileges. Now,

consultants encourage their clients to 1) involve persons from adjacent units in any organizational change process to assure them that the project is in their long-run interests and thus win their support, and 2) spread the process to other sections as rapidly as possible to minimize the 'special status' of any one department.

In other words, QWL experts, who urge their clients to regard a OWL process as a learning experience for individuals and organizations, have engaged in fruitful learning experiences themselves. As a result, projects can now get off the ground more quickly than in the past. Many of those involved still feel that excessive amounts of patience and hard work are needed to get airborne, but in the past many projects dragged on for years. It is now felt that, though the process must be put into motion with some care, too much puttering around with details and discussions can do more harm than good.

Greenfield vs. redesign

Many of the more notable QWL achievements in North America have been in new plants. Naturally, it is more difficult to change established attitudes in an existing plant, especially where technology cannot be altered, than it is to start from scratch in an entirely new facility. Many companies that have compiled impressive records in generating innovative work organizations in new plants have been extremely reluctant to touch their older facilities. This reluctance has had a kind of reverse snowball effect. since managements in old plants have not been able to locate models to emulate. By now, however, the logiam has been broken, and redesign projects have been launched in many older plants. There is perhaps a difference between Europe and the U.S. in this respect. In the U.S., companies are free to shut down plants in one area, laying off workers, and build new plants in another. In Europe, even though one shutdown might not be related to another new construction. companies are under considerable pressure, and often specific legal requirements, to offer continuity of employment. An important factor here is the more centralized nature of European unions, compared with the stronger local autonomy that is common in American unions.

The Tavistock Institute, an origin of theory and practice in OWL

There have been some notable shifts in methodologies over the past decade. Ten years ago, the job enrichment approach of the U.S. psychologist Frederick Herzberg was the best-known method of creating broader and more interesting jobs, partly because it was believed to produce quick results, and partly because it could be applied to individual jobs, without considering other aspects of the organization or management's role. Though job enrichment did generate satisfactory results in some cases, and Herzberg's research contribution (in the 1950's) was of genuine value, job enrichment is

now of much less consequence. Many independent observers recognized some years ago that it was too limited to be of great value, that its ease of application was deceptive, and that more far-reaching types of actions were needed.

By now, the dominant position has been taken over by the theories developed at the Tavistock Institute of Human Relations in London by Eric Trist, Fred Emery, A.K. Rice, Hans van Beinum, and their colleagues. The key element was the view of an organization as an open system, that is, a socio-technical system, encompassing not only the structure of jobs, the people doing them, and the technology, but the interactions between these and other factors, such as contiguous parts of the organization, supervision, and management roles. The theories had been developed primarily in work in the British coal mines in the 1950's, and were applied on the operating level in a group of Norwegian companies in the 1960's. These Tavistock ideas have given rise to a more advanced, more sophisticated attack on the problems of work. A few American behavioral scientists, principally Louis Davis of the University of California at Los Angeles, helped to diffuse these ideas among their colleagues and students. At the Toronto conference, most of the presentations were either directly representative of the Tavistock theories or heavily influenced by them.

In the past few years, some researchers have made efforts to embody some of the principal conclusions of the Tavistock theories in standardized solutions or models that then can be applied in a wide variety of situations. This, in fact, was one of the central principles in the German humanization of work programs, begun in 1974, since the government felt it could not justify the heavy investments in projects custom-tailored for the needs of a single site. Philips Lamp in the Netherlands also attempted to work out a set of models of production systems, that could be put into operation with minor modifications, in different production settings. Such efforts have produced some successes, and in many situations engineers engaged in designing a production system are able to start on a more advanced level than was the case a few years ago, and thus avoid some of the unnecessary errors of traditional engineering design. The achievements in this area have been fewer and less comprehensive than might have been hoped for, and relatively little attention has been paid to this type of development work.

Another area that has attracted little attention has been the question of costs. This is in great part because QWL specialists insist that, since each new system must be custom-fitted to its environment, no predictions can be made. However, many of the innovations worked out by QWL specialists turn out, on closer examination, to display rather close similarities, and many of the resulting systems would lend themselves to some sort of cost-benefit analysis, particularly where innovative engineering design is a large part of the system.

An extremely strong trend, much in evidence at the Toronto conference, is the increasing number of people who, having been introduced to the potentials for improvement in their work organizations, quickly recognize the appeal of the ideas. Irwin Hopson, an operator and union secretary in the Rohm & Haas plant in Knoxville, Tennessee, had this reaction when he was first exposed to the principles of QWL: "It seemed like a great amount of information to absorb in a short time. However, we were surprised to learn that a lot of things the consultant was trying to get across to us were things we had felt all along."

3

Forces behind the trends

Why has QWL, which is a blend of ideas and methodologies known (at least by specialists) more than a decade ago, come to occupy a place of prominence in the business world recently? No doubt one driving force has been the perception of ever-widening circles of managers that workers, particularly younger workers, are decreasingly enthused by conventional jobs in traditional hierarchical structures. One participant at the Toronto conference — a line manager in an oil refinery — explained that he had been assigned to study probable developments in labor relations over the coming decade, and saw some worrying features in the picture: "I think that if we don't do something about the way work is organized, we're going to have trouble down the road."

Though a heightened consciousness of this fact is doubtless heartening to many social thinkers, who have been making this same point to anyone willing to listen throughout the 1970's, it is possible that an even stronger motivating force comes from quite a different quarter. Einar Thorsrud of the Norwegian Work Research Institute, whose pioneering work in Norwegian companies in the late 1960's helped set the stage for much of the progress that has occurred since, notes that a new and different influence is at work: "More companies have become interested in QWL over the past few years than I would have predicted — not as many as I would like, but nevertheless more than I would have thought possible. However, the emphasis has changed from the social values inherent in QWL to productivity, and that is largely due to the influence of the Japanese and the quality circles. The idea of quality circles is having a very healthy effect."

The change in social values and the growth of Japanese competition

Seeing their markets being eroded by the Japanese, managers, particularly American managers, have been forced to conclude that a key element in the Japanese success has been effective work organization. A number of companies, perhaps most notably Ford and General Motors, have been aggressively creating quality circles and similar organizational devices in factories to put to work the thinking power of workers in improving productivity. Thorsrud notes: "This has a strong, cumulative effect. If General Motors is known to be doing something, other companies feel the pressure to follow. If companies use the quality circles as a quick gimmick, they won't work, and if they see that they require a considerable shift in

cultural values, they will find it's not as easy as it looks. In any case, if a company tries to start quality circles and doesn't succeed, it is, in the present climate of awareness, less likely to junk the whole idea than to ask itself what mistakes it is making. This is the most important part of the trend - that companies trying and failing will not just discard the whole idea, as they might have done in the past, but will have to ask themselves what they are doing wrong."

An often overlooked dimension in this complex of factors is the pressure of competition and resulting needs for flexibility, that can best be handled through solutions that are efficient from a technical point of view and at the same time improve the quality of work. For example, machine-paced assembly lines are known to be defective because they generate stress, boredom, alienation, psychologically damaging social isolation, and a generally poor working environment. But it is less widely recognized that they are inadequate in the view of the urgent need in today's business environment for more flexibility and capacity to adapt to model variations and rapid shifts in product lines. A conventional assembly line cannot cope with this type of need, but small, self-regulating, multi-skilled groups can. Even if the principal motivating factor is the technical flexibility of the system, such a design might not be feasible if research by behavioral scientists had not shown that the Tayloristic model of human nature is defective and that many workers not only can cope with more demanding jobs involved in a flexible system, but prefer them. There are numerous situations such as this one, where business pressures match the social pressures, leading to solutions which are advantageous and economical from all points of view. Indeed, many of the principles of Taylorized production systems are sub-optimal, whatever the inclinations of the workers. But the more technical points are often overlooked in QWL discussions that place the emphasis on human values alone.

Despite the rising importance of productivity, there remains among many experts the strong conviction that improving the quality of work is primarily a vital social necessity. Delmar Landen, head of organizational development at General Motors, says: "We are dealing with a cultural revolution . . . How long do you think we can have a free and democratic society if we insist on maintaining totalitarian systems in our companies? We must have freedom for individuals and organizations to grow and to realize their potentials."

Many managers object to the introduction of this type of social value judgements into the business world, which they see as unsuitably ideological. Furthermore, they are often temperamentally incompatible with behavioral scientists, whom they regard as excessively theoretical, and are skeptical of claims that improvements in efficiency and productivity can or should start with the psychological and social aspects of production systems. Behavioral scientists are sometimes unable to articulate their viewpoints in terms that

managers find meaningful, and on the whole have not sufficiently penetrated the intricacies of the business world to co-ordinate their thinking with that of managers, which tends to revolve around short-term, dollars-and-cents considerations.

Many behavioral scientists are also critical of the overly evangelical approach of some of their colleagues. Lisl Klein of the Tavistock Institute of Human Relations in London and a well-known consultant, observes: "I am troubled by these flights into the stratosphere and talk of new worlds to conquer. We are eager to discover new concepts, but we haven't done very much to operationalize the old ones. I'd like to hear less about trust and values and other religious states of mind, and more about getting down to business."

One expert from the UK at the Toronto conference observed: "There are the people on Cloud Nine living in the abstract, and then there are those who are living in the real world — and the two groups don't communicate very easily."

Most informed observers would agree that there is no crippling contradiction between behavioral science and a business orientation. Most behavioral scientists strive to include an improvement in productivity as a prime objective along with their efforts to improve the quality of working life, and there is a vast amount of solid evidence to attest to their success. But they do not always make this point sufficiently clear in their discussions. There need not be any conflict between the two groups, but there is, and it has been responsible for a substantial amount of confusion in organizations. The gap between the two viewpoints is narrowing, but it would be unwise to minimize its importance.

4

Europe vs. America: cycles of progress

There is no particular rivalry between Europe and America, but the evolution has been somewhat different in different countries, and these differences, which continue to influence thinking, illuminate some of the inner workings of the QWL field.

At the beginning of the 1970's the quality of working life came into prominence quite suddenly, partly as a result of the radical spirit of the times - in Europe manifested in the French worker-student revolt in 1968, the Italian 'hot autumn' of 1969, and general leftish tendencies in numerous countries, in America by the strike at the GM Lordstown plant in 1971 and other evidence of the 'blue collar blues'. At that time the best-known approach to understanding the problems was, as noted earlier, the job enrichment theory of Frederick Herzberg. The writings of other American theorists, such as Chris Argyris, Rensis Likert, Abraham Maslow, and Douglas McGregor were also well known. Most American companies interested in reshaping work for more satisfying jobs and better results were using the theories of these experts. Where QWL activities were taking place in Europe – limited at that time to Scandinavia and the Netherlands – it was the American experience that seemed most relevant.

During the 1970's, circumstances changed in America. Economic troubles mounted. There was a thorough de-radicalization of the climate. Lordstown proved to be, not the first of a string of spontaneous revolts against the assembly line, as some observers had expected, but the first and last in the series. Monotony and boredom on the job, which for a short time was a lively topic, faded from public debate. The quality of working life seemed a low-priority issue, and many companies that had been active in the field put on the brakes. At least one U.S. company that had achieved unusually good results in improving the quality of work as well as productivity virtually liquidated its effort when the economic chill winds began to blow. In another firm, which had been built as one of the most innovative new manufacturing units from an organizational point of view, the plant became a subject of bitter internal corporate dispute, and the ideas contained in the design made little impact elsewhere in the company. In some companies, where re-organization projects had begun when job enrichment was a hot topic, applications were amateurish and the results unimpressive, and were downgraded or completely dropped. A good many companies continued to work on

the quality of work, but there was not a great push in this direction, and the level of interest among the general public sank sharply.

Increasingly in the 1970's, QWL specialists both in Europe and America adopted the Tavistock approaches. But in America, there was so little response from some of the people who might have been expected to express an interest in the subject — line managers, engineers, government agencies, and unions — that the behavioral scientists interested in the Tavistock ideas were talking primarily to other behavioral scientists. A consequence of this was that thinking stagnated to some extent, from lack of active discussion. If the theories had been knocked about a bit in active debate among the interested parties, there might have been a more vigorous development of the intellectual climate. This has resulted in a certain aridity in the theories and approaches of the American specialists, which is still to some extent apparent.

European development and diffusion of QWL in the 70's

In Europe, there had been a similar flare-up of interest among the general public in QWL at the beginning of the 1970's, and a similar decline. But there were critical differences. Considerable impetus to develop new approaches came from a number of sources (varying from country to country) — governments (either specialized agencies established for this purpose or politicians recognizing an issue with potential appeal to certain groups), employers' associations (extremely powerful, semi-governmental bodies that have no counterparts in America), unions, and a more leftist political climate than existed in America.

There was considerable discussion, and some legislation, on some drastically different facets of the quality of working life, e.g., requirements that companies place worker representatives on boards of directors, and heavy worker involvement in safety and health and other internal company matters. Perhaps because so many conflicting forces were at work and so many disparate objectives had to be taken into consideration, a highly fragmented and unsystematic patchwork of approaches and theories resulted.

The Tavistock ideas played a dominant role in Europe as in America, but there were many detours, deviations, and variations on the Tavistock themes. In America, the Tavistock ideas were diffused by a relatively small number of experts — behavioral scientists, or persons oriented to the behavioral sciences — who relayed their ideas primarily to other experts with similar orientations. In Europe, ideas on QWL were spread by and among more different types of people — arguably a more cumbersome and bureaucratic process, but enriched by inputs from numerous quarters and generating a body of knowledge with more facets and nuances than was the case in America — and consequently much more varied, and perhaps also closer to reality. This was less true of Canada than of the U.S.,

inasmuch as Canadian government bodies (both federal and provincial) and unions took a more active and aggressive interest in QWL than did their counterparts in the U.S. In this respect, Canada is closer to Europe than to the U.S.

Some examples of this diffusion process in Europe can be instructive. In Sweden, the QWL field was to a great extent taken over by SAF, the Swedish Employers' Confederation, which meant that approaches recommended to companies reflected the preoccupations of line managers and engineers. Although the SAF methods were heavily influenced by behavioral scientists' conclusions, the methodologies incorporate large measures of industrial engineering and productivity improvement. This has not been altogether to the liking of unions and their supporters (who would have preferred more emphasis on legislated systems of participation) and some other researchers (who would have liked more dominance by behavioral scientists). In Germany, there are relatively small numbers of behavioral scientists, and many of those who are active are believed to adopt exaggeratedly leftist positions and are thus regarded with much suspicion by managers. In addition, the rigid legislation regarding works councils makes it difficult to obtain participation of employees in designing their own organizations or to use semi-autonomous groups. The unions, especially the powerful metalworkers' union, are extremely watchful to see that infringements of their authority do not occur. This situation fits in with the German humanization of work projects, where the emphasis is on engineering design of systems that can be widely applied in various production systems without sounding out employee reactions. It is therefore engineers, rather than behavioral scientists, who dominate the projects. The findings of behavioral science receive a considerable amount of attention (Lisl Klein of the Tavistock Institute has been serving as a consultant to the German government on this subject for a number of years), but they are applied in system design by engineers. In Italy, the initiative was seized at an early stage by the unions, which pressured large companies to improve jobs at the same time as they were putting forth other demands, and specific measures for improving the quality of working life were frequently written into contracts (for example, this is the reason Fiat organized production around 'islands' instead of a line at one plant, and its Cassino plant was located at Cassino in response to a union demand that the company invest in the economically depressed Mezzogiorno). When managements took the initiative, the unions insisted on the right to monitor closely and to co-manage. In all cases the unions have watched carefully to see that workers' interests were being promoted. On the other hand, they have generally refused to take any interest in productivity, which they have maintained is the company's problem, not theirs. The rejection of union responsibility for productivity may have been tactically unwise; when the economic crisis arrived, the unions were forced to

de-emphasize QWL and to concentrate their energies on bread-andbutter issues such as the reduction of unemployment.

Governments have developed a keen interest in QWL. State agencies promote QWL in the UK, France, Belgium, Germany, and the Netherlands, and various conflicting viewpoints have to be integrated in the agencies' activities. In Norway, legislation requires companies to design production systems in accordance with principles of participative management.

The consequence in many European countries is that the QWL theories invented by behavioral scientists have integrated, through this friction with diverse and sometimes alien forces, a wider range of objectives into their operational structure than is the case in North America.

During the recent past, it may fairly be said that there has been an explosion of interest in North America in QWL - in the form of a sharper focus on events that were taking place a bit out of the limelight during the 1970's and a new burst of activity in places where OWL had been dormant or nonexistent for some time. As noted earlier, this new wave of activity has been in great part because of the fascination with Japanese quality circles. It should be noted that these quality circles do not involve appreciable changes in jobs, but are concentrated primarily on creating positive worker attitudes. Some of the U.S. effort has been directed toward copying the Japanese, which fits in well with the pre-existing orientation of OWL experts, that is, toward the psychological and social aspects of work. General Motors, for example, has established great numbers of quality circles, but little change has occurred in the GM Assembly Division, which is noted for having devised some of the most highly Taylorized and objectionable jobs in the company.

There has been no comparable explosion of QWL activity in Europe — perhaps because the Japanese invasion there has been less aggressive than in North America, or perhaps for other reasons. Progress in QWL is being made at a steady pace, but in terms of practical applications the position of leadership (if there is one) now seems to be in North America.

One Swede at the Toronto conference gave this impression of the differences between Europe and North America at the present time: "The Europeans are using more complicated and more sophisticated techniques than the Americans — but the Americans are doing much more than the Europeans." Some Europeans, however, find that North American QWL efforts are dominated by vacuous discussions of principles and idealistic theorizing by behavioral scientists. Karl Furmaniak, project manager of the German humanization of work program, says: "You have the rhetoric — we have more of the reality of QWL."

5

QWL in corporate strategy

The policy of AT&T

As mentioned earlier, the improvement of QWL has become a top priority item in a number of large and small companies. The nature of the strategy varies considerably.

At AT&T, QWL has become a concern of top management, and in 1980 notice was sent to all the operating companies in the Bell system on the implementation of this new element in the company's policy.

In addition, QWL objectives were integrated in the contract with the Communications Workers of America in 1980. Ronnie Straw of the CWA says: "We thought the QWL part of the contract was the most important."

One factor behind these developments was a slowly growing lack of trust between management and workers. Surveys of employee attitudes showed that workers felt management didn't trust them. Moreover, they believed that computer systems were robbing them of some of the autonomy they prized in their jobs. A worker participation program had been started, but it was seen as a one-way street by the employees. They did not feel their ideas were taken seriously – the objectives were only productivity improvement, not the employees' experience of their work. To the unions, this signalled the dangers of unilateral management control. The CWA contacted Michael Maccoby, the noted psychiatrist, social thinker, and consultant, who concluded that union involvement in the participation system would bring about a significant change. This could benefit both the company and the union: the workers would be more co-operative if they perceived that their views were being considered, and the union could be sure that its values would be promoted and its interests protected. The objective of participation jointly agreed upon and included in the contract was: 'to solve the problems when they occur where they occur — by the people who have to live with the solutions'. The contract also specified that there would be no layoffs or speed-ups as a result of the participation program; freedom to file grievances would not be disturbed; the unions would not object to increased productivity; the unions would be involved in all phases of the program; an emphasis would be placed on individual dignity. A joint national committee was formed to pursue the goals, with Maccoby as consultant.

From the union's point of view, the most serious problem is management. Straw says: "They want to present finished projects to the union for approval, while in many areas the union is bogged down in cosmetic arrangements. If that's the limit of participation, then it's no good."

The management side concedes that it has a lot to learn. Lilian Lynch of Illinois Bell (where the process of applying the contract has gone further than in most other units) says: "You can't just talk about QWL — you have to live it. Training in QWL is absolutely necessary. I hadn't thought so at first, but you have to unlearn what you thought you knew and then learn all over again."

The process is still in its early stages, but both sides are optimistic. The CWA's Straw says: "We believe worker participation will have a major impact on the company."

General Motors and QWL

As noted, General Motors has been somewhat concerned with QWL for a number of years, but has quite recently launched a major drive to improve the quality of working life in its plants, as a result of the Japanese competition, which is suspected of being strongly propelled by the quality circles, and research into the concrete effects of worker discontent. GM's Delmar Landen notes: "The correlation between absenteeism increases above 8% and increasing in-process defects is .93 — almost a perfect correlation. You add more inspection, which generates more defects, since workers subconsciously feel less pressure, and this leads to more repairs and more overtime."

The basis of the GM program is the creation of new organizational structures and interrelationships which rule the activities of the people. Landen says: "If we are sincere about making QWL more than a passive social science blip on the industrial screen, so to speak, we are going to have to create organizational systems that institutionalize the norms, the boundaries and the cultures which are the elements of the QWL process. Delegation, shifting of responsibilities, new configurations of decision-making — these things are not going to happen if we do not create the organizational structures, the empowering mechanisms that give people the knowledge and skills they need for responsible decision-making."

The objective is thus to establish these new structures at every level of the organization, train people to become more involved in decision-making, and then let them move into the new structural mechanism. GM is working hard to refine and improve this process. Landen says that a problem at the Tarrytown plant — site of a heavily publicized participation program which began to unravel when personnel changes were made in the plant management — was that

training was not followed through with the creation of a structural mechanism in which the training could be used. At other plants, such as Fisher Body Detroit, a similar program was put into operation, but those coming out of the training who wished to, could move immediately into an employee participation group - a 'structural participative mechanism'.

Most of the GM work has been on organizational structures and relations between people — not on technology. The General Motors Assembly Division, which has acquired a reputation for creating some of the most objectionable jobs in GM, continues to operate much in its traditional pattern.

QWL and the Aluminum Corporation of America

The Aluminum Corporation of America has a considerably different approach. In 1972, the company built its first plant, in Ohio, based on the Tavistock open system approach, similar to that used so successfully by Procter & Gamble, using the same consultants as those employed by P&G. It was organized around groups, and was a unionized operation (UAW). In the mid-1970's, another new plant was built in Texas, also unionized (USW), in which the QWL aspects were covered in the contract, which has since been renewed twice with this part essentially intact. In the 1980 national USW contract, QWL was again a feature. Perhaps more significant for the future than this series of separate projects is an overall policy plan which was drawn up over a period of a year by a special committee. The committee visited 70 other companies and made recommendations of technological and organizational design, human resources planning and development, and productivity. The committee's recommendations were sent to all officers of the company, and those that were approved were included in the 'Advanced management program'.

David Mader, productivity director at Alcoa, explains that this program is designed to guide the company's development in the 1980's: "We're going to crank this into all sites in the company. Managers will have the opportunity to develop their own plans. They will have a considerable amount of autonomy. But they will have to have a plan."

The program includes a number of principles which are intended to replace the previously accepted conventional wisdom. Some examples of the new principles:

New principles	Traditional principles
Utilize the thinking of every employee who can improve organization effectiveness	'Workers work and managers think'
Management perceives its power to be earned through leadership and know-how	Management perceives its power to come from prerogatives and level of position
Both human asset management and financial performance management are measured and rewarded or penalized accordingly	Human asset management subservient to financial performance management
Job design balances people needs with technology needs	Lowest common denominator job design for maximum control
Worker rewards meet self-esteem and societal needs	Worker rewards are predominantly wage, benefit, and security oriented

QWL and General Foods

A different type of evolution has been demonstrated in the case of General Foods. The famous GF plant at Topeka, Kansas, was completed in 1971. This plant was, and still is, regarded as an outstanding example of modern production systems design, incorporating group operation, broadened jobs, high skills levels, a low level of supervision, and heavy employee involvement in plant management matters. The plant has attracted considerable attention, both in America and abroad, and a similar GF plant located in Rheims, France, was completed a couple of years later. Job satisfaction was high and unit costs were extraordinarily low. This writer happened to visit both of these plants shortly after they were put on stream. Both were impressive in their use of unconventional production systems – with complex work patterns built into the engineering design – and participative supervisory practices. The French version was less advanced than the Topeka plant, but compared with customary authoritarian French management practices, it was remarkable in terms of job satisfaction as well as productivity.

In recent years, much controversy has swirled around the Topeka plant. It has aroused suspicion and hostility within General Foods since its earliest days, among managers who could not accept the unorthodox practices. Various reports circulated that the original ideas were fading under the conformist pressures from corporate headquarters, which had been chipping away at some unique features of the Topeka system. This seemed to be confirmed by the departure from GF of some of the managers who had been identified with the plant's design and operation. The most perplexing aspect of the situation was the failure of the Topeka innovations to be copied on any appreciable scale elsewhere in GF.

In Toronto, a team of employees from Topeka, including the plant manager, made a presentation of the 'ten year young' history of the plant, the first time in many years that any extensive information has come from GF. The group explained that some changes had taken place in the plant over the years. Many of them were more or less ordinary adaptations (decided upon by the employees) in the face of routine problems, such as resolution of some friction in the functioning of plant work teams through a merger of teams, making it easier for employees to shift between jobs. A more troublesome event was the introduction of a new procedure for hiring replacement of a team-managed process by a more carefully codified, bureaucratic set of steps. This change was prompted by fears of violating the Equal Opportunity Legislation, but it caused some resentment among employees because they were neither consulted nor adequately informed of the reasons for the change – a slip-up that management now concedes was an error. The group also gave hints of some struggles with corporate headquarters, such as an attempt to replace the employee-managed plant purchasing procedure with appointment of a conventional purchasing manager. The plant countered with a proposal to retain something of its own system, but slightly more formalized, and with better control; the plant won this argument. The group declined to comment on questions regarding the reports of hostility within the corporation to the Topeka concept. Herm Simon, plant manager, noted, "Sometimes we get our way and sometimes we don't, but we have a fairly good batting average." He emphasized that such disagreement was normal in any company.

In any case, it seems that the essential elements of the plant are still in operation, even though outsiders might conclude that being on the defensive is scarcely conducive to further development of the participative system. The group spoke with considerable pride of the plant's unusual system, the respected position it enjoys in its community (more than 1,000 unsolicited job applications are received each year, more than three times the number of employees), and its continuing favourable operating figures (low costs, high quality, and productivity improvements in nine of the ten years since the plant was completed).

Volvo – a position of prominence

Doubtless the most innovative European company in matters of work organization is Volvo, the Swedish car and truck manufacturer. The company has attained this position in part because of, firstly, the strong views on the organization of work held by its president, Pehr Gyllenhammar, and, secondly, the social and labour legislation in Sweden, which alleviated the penalties on workers who stay off the job at the same time it applied pressure on companies to improve work environments and working conditions. Expectations that the company would take the lead in this field would in any case be

automatically high, since it is Sweden's largest manufacturing company and is an industry in which the proportion of rotten jobs has traditionally been large.

The company's campaign to improve jobs began in the 1960's, partly as a result of the company's experiences with works councils (management-worker joint consultation bodies, established in Sweden in the early postwar period), and partly because of experiments, initiated at various sites by supervisors, engineers, union representatives or workers, in job rotation, autonomous group operation, and other relatively mild forms of work reorganization, often motivated by ergonomic considerations.

In 1971-72, the company moved out of this stage of 'disconnected trials' and into a new and more aggressive developmental stage, building on the experience gained in the earlier work. Berth Jönsson, Volvo Corporate Planning Director, says: "No company can afford to continue experimenting on this broad scale. It must create a strategy and decide how to go about implementing it in the most efficient manner. We are right now in an advanced stage of the second phase which includes new creative solutions to flexible hardware technology and the diffusion of ideas to Volvo subsidiaries outside of Sweden."

One of the earliest, and still the most famous, result of the strategic planning was the novel final assembly plant at Kalmar, completed in 1974, where the conventional straight-line machine-paced assembly line, with short-cycle jobs excluding use of operators' initiative, was replaced by a series of production islands separated by buffers, based on the work of multi-skilled, self-regulating groups.

This plant became, for rather irrelevant reasons, highly controversial, and for a time was discussed outside Sweden as a failure which would never be repeated. This was not the case, and nine Volvo plants finished since that time have incorporated some of the Kalmar ideas. They have also used features in the next generation of technology after Kalmar. For example, in the Kalmar plant, car bodies move through the assembly operation on sleek, noiseless trolleys following magnetic tracks embedded in the floor. Some later plants go a step further — units under assembly are transported on hovercraft-like cushions of air.

There are a number of levels of job-improvement at Volvo. In the first step, the cycle is lengthened and the number of separate tasks is increased (horizontal job enlargement). On a second level of complexity, jobs are expanded vertically, to include such items as inspection of incoming materials, materials handling, quality control, adjustment for defects, tooling and re-tooling, and maintenance. At the third level, groups of operators participate in production planning, rationalization projects, hiring procedures,

Obviously, progression from the first of these levels through the others increasingly involves organizational change rather than the re-shaping of individual jobs. Two programs which serve as support systems are a series of lectures and discussion about products, and various courses in interpersonal relations, group working and problem-solving.

At Volvo, the effort to improve the quality of working life is a high-priority, comprehensive company-wide project. For Gyllenhammar, the president, this is a most urgent and serious matter. "The working man needs a sense of purpose and satisfaction in his daily work. He feels the need of belonging to a team, of being able to identify himself with the goods he produces and — not least — of feeling that he is appreciated for the work he performs." So strong are Gyllenhammar's convictions on this subject that he may be said to have imposed democratic organizational forms in an authoritarian manner. The unconventional Volvo design evolved from a Gyllenhammar dictate regarding the general principles to be incorporated. He rejected some preliminary, insufficiently daring proposals, after which the engineers were sent back to the drawing board to try again.

One of the lessons the company has learned in its efforts on QWL, according to Jönsson, is that, even though a positive management attitude to change is essential, if this turns into an overly rigid "endeavor to impose programs, projects and plans from above we tend to fail." The company also feels that, for best results, "initiatives for change must come from the fline and not from white-collar specialists." Moreover, it is advisable to regard organizational innovations as being without fixed limits — over time and through the organization. "Changes in the work situation must include a package of activities introduced over a period of time... Isolated trials with the introduction of, for instance, simple job rotation, are doomed to failure."

Sherex Chemical, the early stages of implementation Some instructive insights into current QWL practices can be gained by looking at companies still in their early stages of entering this field. At the Mapleton, Illinois, plant of Sherex Chemical, management saw a number of reasons for launching a QWL project. First, there was a history of poor labour relations, including one lengthy strike, costly for both sides. Kenneth Johnson, plant manager, says: "After this, I was convinced there must be a better way." Boredom was a problem. Management felt that the traditional supervisory job had to be changed if the supervisors were going to

stay on the job, but it was not possible to redesign their jobs without also changing the operators' jobs. Of the latter, Johnson says: "The company and the union had co-operated in creating boring jobs, easy to learn, with no challenge. We got highly qualified applicants but never asked for their ideas, suggestions or participation in decision-making. We had good workers but didn't use these valuable assets."

In late 1979, the plant hired Lyman Ketchum, the consultant, to help start a QWL project. It was decided that the plant would be suitable for a OWL project based on socio-technical analysis. Ketchum discussed the project with plant management, with workers and with the company president. A steering group was composed, consisting of the plant manager and his staff, the union executive committee, and one first-line supervisor. A core group, a unit with about 35 people in it, was picked to start with, where bad attendance, productivity difficulties, and an undisciplined workforce were some of the headaches. Some of the problems encountered in the early stages were these: middle managers felt left out of the proceedings; there seemed no way to measure the success; foremen felt threatened by job insecurity; OWL was often viewed as a short-term experiment. The rejection of OWL by managers presented a problem, and had to be handled with training. The company quickly gave employees a no-layoff guarantee and assurance that decertification was not a goal.

The program has been in operation a little over a year, and has not produced any concrete results, though both managers and the union feel that personal relationships are better. Bob Morrison, a supervisor, who notes that the supervisors thought the project would never work, and that employees would never be able to participate usefully in plant management matters, has modified his position somewhat: "I was assigned to the core group. We decided to follow all the steps in manufacturing one of our products. In doing this, we found several problems in some operations. We discussed them and found some solutions. That showed us that this technical analysis had some merit."

Rohm & Haas, QWL and the need to introduce a new system of work The Knoxville, Tennessee plant of Rohm & Haas started a QWL project primarily because a major product, plexiglass, was facing some serious new competition, and the plant's survival seemed to depend on the successful introduction of an extensive computerized real-time information system and a rearranged work flow to reduce materials handling costs.

A first phase was to be in the plexiglass finishing and shipping unit, a high-volume, labour-intensive operation producing 25,000 sheets per week and designed to handle 22,000 separate items. The program would change or eliminate numerous jobs. The normal

method would be to announce the plans, put them into effect immediately, and try to wear away the resistance. But there was a desire to avoid this type of confrontation this time. Joe Foster, production manager, says: "Our studies indicated that a design around whole jobs could result in a better plant, and that the sociotechnical approach would be more effective. We also felt that the involvement of operating people, hourly employees and foremen in the design would produce a better design and reduce resistance."

A consultant was hired and a pilot project was developed in loose sheet handling, and it was hoped that the pilot project could be handled by a task force of salaried and hourly employees, whose objectives would be to improve customer service, increase the return on investment, and create a good working environment (the first time the latter had ever been established as a goal in such a process). The situation and the idea were revealed to union representatives in an unprecedented presentation, noting that jobs would be eliminated, but offering a no-layoff commitment in return for union co-operation. After some lengthy skirmishing, the union accepted, and the task force was set up with representation of the union, management, and employees, plus the consultant.

The task force began with presentations by union and management sides of their understandings of the QWL process. There was some trouble connecting the social and technical aspects, but management focused on the technical, and the union side on the social, which on the whole appeared to be a good arrangement. The task force development period proved, according to a union member, to be a time of "learning, growth, testing, crises, frustration and evolution of trust between the members". There were some considerable strains, but after eight months of work the group presented a concrete set of proposals, which involved considerable change in layout, and which would reduce operations in the pilot area from ten moves and seven storages to three moves and two storages, eliminate three employees, cut worker classifications involved from six job grades to three, and the department boundaries from six to three. The proposal included data on payback time of investment, return on gross assets, discounted cash flow, and adverse conditions that might affect the design. Irwin Hopson, a union member, says: "The redesign, so I'm told, is radical enough to compare with any design ever done at a greenfield site."

According to management, the proposal, which was accepted after some "crises in trust with that group" due to a need to modify it, was attractive because it would reduce dependence on other departments in producing plexiglass mirrors. A year after the task force had begun its work, training of operators for the new self-regulating team operation began, with a temporary new arrangement of equipment (prior to final engineering changes). After five more months, the process of turning over the operation to the team began. The

operators now schedule production, arrange for all mechanical work, order and maintain supplies, and negotiate with the raw materials supplier. About 15 people have been trained for the new teams, and about 10 members of self-regulating teams are in development. Altogether, about 150 people (25% of the plant's workforce) have been involved in the program.

From the company's point of view, the object of the exercise is greater efficiency. Joe Mettalia, the area manager for plexiglass mirrors, says: "We haven't yet seen a bottom-line improvement in productivity, but I'm convinced that, if it comes, it will be because our people are on board and involved rather than because we have contrived some technical improvements. We've learned that, if you set up a group to devise a new work structure, you must have a continuing dialogue between that group and operating personnel. All the potentially involved supervisory personnel and line personnel need significant training and practice in the new participative management mode. The turnover of supervisory work responsibilities to operators needs to be done as soon as possible. Worker involvement only becomes significant when the workers can actually see the supervisors stepping back and allowing them to control. We think we have a higher degree of trust, but we must continue to build on this base."

6

QWL impact on unions

Labour unions have been in an ambivalent position regarding efforts to improve the organization of work — torn between a desire to get better working conditions for their members (which QWL does) and a reluctance to encourage workers to identify with management goals (which QWL also tends to do). The suspicion that QWL may reduce union loyalties is based on facts. Some well-known innovations in work organization have been put through in non-union settings, where employees became so satisfied with their work that they are unusually indifferent to union organizing attempts. One management consultant, formerly a personnel officer of a large U.S. company, has openly promoted his services in improving the quality of working life as a means of combating unions.

In the past, both unions and companies were caught badly off balance by the new challenge of QWL. The unions were undoubtedly remiss in recognizing how they could use QWL in helping their members — and how companies could use it against them. Many of the pioneering QWL projects were in non-union plants, but often this was because managements did not know, and did not take the trouble to examine, the potential fit between the new QWL ideas and union policies.

In any case, by now numerous union leaders have become acquainted with QWL, and there were some 250 unionists at the Toronto conference. In many cases, presentations of company case histories were made jointly by managers and union officials — which would have been inconceivable only a few years ago. The reasons for union interest in QWL are, in part, the same as those offered by managers — jobs that contain more responsibility, and thus are more satisfying, are also frequently more productive. Irving Bluestone, former vice president of the United Auto Workers, says: "Workers want to perform their jobs well; they want to produce a quality product... They recognize that good quality is tied inevitably to improved job security through assured sales."

Bluestone was the first top labour official in North America to develop an interest in QWL — around 1970. By a happy coincidence, this interest proved of great value when the U.S. auto companies began using worker participation to push up quality and productivity. The UAW now acts as a partner and, in a sense,

co-manager of the participative management programs in force at Ford and GM. Chrysler's appointment of a UAW official on its board of directors in return for union help in meeting the company's financial crisis is participation of a different sort, but is nevertheless recognition of workers' capacity to carry more responsibility than they have had the chance to do in the past.

Another notable example of union involvement is the steel industry, also suffering from foreign competition, where the United Steel Workers has entered into agreements on far-reaching participation in management matters. Sam Camens, an official of the United Steelworkers, states that one of the underlying reasons for the industry's troubles was an overly authoritarian management style that had a heavy influence on the reaction of workers: "When they came into a plant they came into a totally autocratic world; alienation is scarcely the word for it — it was more like total hatred for the whole system." Camens is optimistic about the potentials of the 1980 contract provision on worker participation, which he feels "may turn out to be more important than anything else in the contract''. Some other North American unions that are actively co-operating in QWL projects include the Communications Workers of America, the Oil, Chemical and Atomic Workers, and the United Glass and Ceramic Workers. Representatives of all these were at the Toronto conference.

Confrontation and collaboration

Even though QWL activities serve to reduce unnecessary and unproductive labour-management friction, few managers see any possibility that it will basically alter the union's adversarial role. David Mader of Alcoa points out: "Some managers have asked how we are going to eliminate adversarial relationships. We are not going to eliminate them. We feel that union relationships will inevitably be alternately adversarial and collaborative, and we are only trying to increase the collaborative element." Art Kube, an official of the Canadian Labour Congress, agrees that a high level of strife is not essential: "After all, the unions are not interested in having constant confrontation policies. It does not fulfill any useful purpose." The unions are frequently finding that it is poor tactics to stay out of QWL activities. At Sherex Chemical, the union withdrew its participation from the QWL project in retaliation for a company dismissal of an employee – but came back six weeks later. A union official explained. "We felt we had too much to lose by not participating in QWL." At the Rohm & Haas Knoxville, Tennessee, plant, the union considered, then rejected, an offer by management to participate in a QWL project. After six months during which mangement went it alone, the union voted to change its mind, because, as the union president said, "Maybe we shouldn't refuse something we knew nothing about."

Some gains for unions' involvement in OWL

The union role in QWL is usually discussed in terms of risks and potential negative impacts on union goals. Usually overlooked are the ways a union may benefit, but here are some, cited by Edward Cohen-Rosenthal, a U.S. consultant: access to information, avoidance of management mistakes, better public relations, more money to bargain over, increased support for union leadership, improved health and safety, reduced stress, less unnecessary supervision, and improved interpersonal relations.

Where unions have been involved in QWL projects, it has become customary for the involvement to be formalized in a written agreement establishing a joint labour-management steering group, containing job security and seniority rights, and sketching out generally the objectives of the project. In some cases, the co-operation is discussed in the normal collective bargaining process and included in the contract.

In North America, even though the unions have often demanded and received various types of protection of their interests, their participation tends to be passive – limited to watching managementinitiated activities and ensuring that the promised benefits to workers actually accrue. So far, North American unions have not made any more aggressive demands in connection with the organization of work, though other approaches are possible, as has been shown in Europe.

One of the best-known examples of union involvement in such matters was seen in Germany, in the 1973 strike by the metalworking union in Nordbaden-Nordwürttemberg. After a twoweek strike, the union won a 55-point package of 'humanization of work' measures, ranging from protection for older workers to establishment of a minimum 90-minute task cycle on new, machine-paced assembly lines. The contract led to concrete improvements in working environments in some factories and, perhaps more importantly, sensitized other unions as well as managers to the importance of 'humanization' issues in the work environment. It also was part of the pressure for the launching of the government's humanization of work program the following year. As mentioned earlier, German legislation is interpreted by the union as barring some usual features of work reorganization projects.

Another frequent union demand is for higher wages, e.g., an automatic upgrading of everyone affected by a reorganization project as an advance dividend on the higher productivity management expects. Needless to say, managements strive to resist such demands.

In Sweden, the unions have objected vociferously to projects initiated and run by managements, since they did not give workers sufficiently solid influence over meaningful aspects of company

operations, but only over the immediate workplace. These projects had often been described as 'industrial democracy', but the unions maintained that this was a highly misleading label. These objections were part of the unions' campaign to win stronger rights through legislation, which they in fact did in the 1976 Co-determination Law, granting workers the right to negotiate over any aspect of company operations and in fact requiring managements to offer to negotiate on important matters before decisions are taken. Similar arguments have been started by the Dutch unions, which managed to delay a government-sponsored series of 'work structuring' experiments for some years while they discussed a demand that the unions be fully involved and that the projects not be narrowly limited to aspects of individual jobs. The unions won this skirmish, but elsewhere have frequently acted to discourage work structuring projects.

In France, the unions are quite ideologically oriented, and sometimes refuse to be involved in projects on the grounds that their co-operation would only serve to buttress the capitalist system. The unions are extremely weak, and only occasionally does this attitude prove genuinely troublesome. But the threat of union objections plays a definite role, and this is one reason that French companies tend to be highly secretive about their activities in improving work organizations.

Technology and QWL

In the nineteenth century, when workers first began to combine forces to obtain more control over their work, they placed heavy emphasis on the de-skilling effects of industrialization as well as on wage questions, but because employers were particularly resistant to pressure on such matters, energies were gradually channeled almost exclusively into wage questions.

Today, much attention is again being directed to this issue of de-skilling by advanced technology. However, there is insufficient concrete understanding of the connections between new technologies and how they can and will affect the quality of working life.

Socio-technical systems as a design concept

As mentioned earlier, one of the central concepts in the Tavistock school of thought was that of the socio-technical system, i.e., a view of an organization as not merely a technical system, which had been the traditional approach taken by engineers, or primarily a social system, which was a tack taken by some social scientists, but a total organism in which various aspects interact. This basic idea is rather simple, and the solutions are limited in number — that is, the jobs and the organization around the technology may be adapted to make a better fit with the technical system, or the technology may be adapted to fit around the social system (or what is believed to be a desirable social system), or some of both.

The first method is the approach adopted in the early experiments in the UK coal fields, launched because new machinery was not generating the productivity that had been calculated, with considerable boosts in productivity resulting from allowing workers to restore some features of the old social system. Though this was some 30 years ago, and the human problems triggered by the introduction of new technology are much discussed, few of those concerned with new equipment have focused on these problems. At the Toronto conference, Oliver Tynan reported that the Work Research Unit, the UK government agency that he heads, sent a group to a large trade show of robots and other new types of equipment and asked every exhibitor about the consideration given to human considerations in designing the equipment — not a single exhibitor gave a positive response.

Most companies purchasing the equipment are also largely neglecting the question. According to a study of computer integrated manufacturing systems made by Melvin Blumberg and Donald Gerwin of the University of Wisconsin, "Too much attention has been paid to development of technology and not enough to the adjustments needed in organizations to accommodate the technology." The study showed that workers in such installations experience many of the familiar symptoms of alienation abnormally low variety, task significance, feedback, meaningfulness of the work, and knowledge of results. The authors conclude: "We seem to be galloping headlong into a valley of technological chaos... New manufacturing technology is being designed with little regard for the skills, attitudes and systems and procedures necessary to support it. Consequently, technical complexity is outstripping the capabilities of firms to deal with it." Many companies invest in this type of equipment without the means to evaluate the costeffectiveness either of the equipment itself or the actual operating environment in which it will function.

In the case of some rather standard types of technology that have been in use for some time, means have been found to make better use of the technology and at the same time create a more human system. One key is to avoid simply dropping an advanced piece of equipment in the place of an old piece of equipment; it is preferable to re-think the entire process, including the technology as well as the jobs. Substituting a numerically controlled machine tool for a conventional machine tool, for example, can have a negative effect on a system, since the operator can no longer make adequate use of his skills, has less control over the machine, and often is more closely tied to a line operation. With retraining, however, he can do setting-up, programming, and some maintenance, meaning that the job is broader and more interesting, and the overall operation is smoother and more resistant to disturbances. A study in Germany showed that, where conventional numerically controlled machine tools were in operation, low-skilled workers could be used, but in the case of computerized numerically controlled machine tools, the machines could be programmed on the shop floor and therefore advantageously operated by skilled workers. Skilled workers were operating the conventional NC machines in 42% of the cases, but the computerized NC machines in 78% of the cases.

A step beyond this type of somewhat passive adaptation to machines is the design of production systems with a particular social system in mind. A classic case is the above-mentioned Volvo Kalmar asembly plant, where social and psychological considerations were built into the architecture and engineering design. The building is multi-cornered, and a group of operators for an assembly stage is located in its own corner with its own locker room, shower and entrance — to enhance the group feeling. Since assembly is separated into

groups, broad, relatively long-cycle jobs are part of the system, but to some extent operators may design their own jobs. A buffer system frees operators from the pace of the line.

Obviously, the functioning of the system does not depend on the human organization or management styles alone — in fact, many features are so firmly embedded in the design that it would be impossible for an antipathetic manager to alter them.

It is perhaps because of this revolutionary aspect of the design that the plant aroused such strong antagonism in its early years. Lisl Klein says: "A successful and sustained experiment arouses a lot of resentment. There was a large increase in the flow of tourists to Sweden due to people intent on proving that the Volvo experiment doesn't work." At the Toronto conference, Berth Jönsson felt impelled to offer assurances that Kalmar was not a failure.

A somewhat similar basic concept is seen in Fiat's newly designed asynchronous engine assembly, scheduled to be in operation soon. Designed for engine assembly, this new system is built around a series of modules, each consisting of one or more bench stations, interspersed with automatic operations and connected by buffers. Maria-Theresa Schütt of Fiat notes that the "main objective is to provide generally improved working conditions by eliminating the workers' tight interdependence with the assembly line and with each other, to give individual operators a certain amount of operating flexibility."

If it is possible to design improvements in the human organization into the engineering of individual systems, then it should be possible to design improvements into components of systems which could then be combined into larger systems. Substantial amounts of such development have, in fact, been done in Germany, where researchers have developed standardized models of assembly and machining line design, buffers, and configurations of production systems that combat stress in various types of jobs.

The Swedes have been developing similar organizational solutions, but concentrating on the design of entire factories or production units. A group known as the 'new factories' project has been collecting, and attempting to systematize, examples of innovative Swedish factory design that offer a favorable fit of the social and technical systems. For example, it is generally accepted that the smaller the unit the more acceptable it is to the employees, but there is not a great abundance of knowledge of how this may be done in economically advantageous ways. The Swedish group has been developing methods of shrinking the size of organizations in ways that will also improve their efficiency. For example, many large units doing batch production can be split into small 'factories within factories' to produce families of similar products. The outcomes can include more satisfying jobs, higher productivity, faster throughput times, lower in-process inventories, simpler planning processes, less supervision, and better quality. These may be offset by higher initial investment or other factors, but often the balance is nevertheless in favor of smaller units. In any case, this method of attack offers a means of assessing the costs. Similarly, assembly lines may be split into parallel 'flow groups', which not only do away with the stress and monotony of short-cycle, machine-paced jobs, but are also more flexible (model variations may be easily introduced), and more resistant to disturbances (on a long assembly line, if one person is absent from his post, the entire line stops).

At the Toronto conference, Jan Edgren of the Swedish Management Group (a consulting firm affiliated with the Swedish Employers' Confederation) offered some guidelines on calculating the cost-effectiveness of such solutions. Edgren notes that this approach, which has been largely promoted by the Swedish Employers' Confederation, has attracted considerable criticism from the left in Sweden. Edgren comments: "Only principles that are economically efficient will in the long run prove themselves to be viable. It is such principles that must be the foundation upon which a better working life can be created. We simply cannot afford anything else."

QWL specialists often object to the use of 'canned' designs, on the grounds that a system must be designed from scratch to fit the circumstances. Nevertheless, some basic principles and problems do not have to be researched from zero for each new system — such as the stress caused by short-cycle jobs, workers' dislike for machine-paced assembly lines, the preference of most workers for group working, and the greater opportunities for social satisfaction presented by smaller units. A knowledge of tested solutions can thus be extremely valuable. However thorough the design process for a particular system, the designers must possess a 'vocabulary' of system components and the meaning of each for the total design. This is the approach being taken by, most notably, the Institute for Production Technology and Automation in Stuttgart, Germany, and the Swedish Employers' Confederation.

Training for QWL

There has been little professional training available in the techniques of improving the quality of working life, although a few U.S., Canadian, and European universities and university-affiliated research institutes have offered courses in organizational behavior, the social psychology of organizations, and the like, but not always specific to Quality of Working Life organizations. There are also a number of seminars and short courses operated by consultants and research institutes, and some 'networks' of interested managers who meet from time to time under the aegis of various consultants, in order to keep up to date and to swap experiences.

QWL training – a developing resource in North America

Recent developments in North America have seen the growth of a number of different institutions, both private and government sponsored, that are striving to provide services to an ever-growing demand.

Some two years ago the Government of Canada, through its Department of Labour's QWL unit, set up an informal network for consultants. The provincial government of Ontario itself set up the Ontario Quality of Working Life Centre in 1978. This Centre has an action-oriented approach with field projects as a core component of the program. Apart from direct project consulting, it provides a variety of educational courses, ranging from one-day introductory seminars to week-long in-depth socio-tech training courses, as well as tailor-made learning events for individual project settings. In addition, a number of different networks, both from organized labor and management, and consultant groups are being facilitated by the Centre as further development in inter-organizational learning in QWL.

The well-known American training program is the series of short courses organized by John Cotter Associates in co-operation with the Center for Quality of Working Life at UCLA. These courses introduce participants to the general field of QWL, more specifically to socio-technical systems theory, and methods of initiating a QWL program. What do the students do with their training? James Taylor of UCLA says that a customary pattern is for a company to send two people, perhaps a line manager and a behavioral scientist, to the course. Companies interested in applying the methodology usually

hire someone connected with the course or an independent consultant to come to the company to put the process in motion and to train the people in the plant — which generally requires a total of at least 30 working days spread over a period of time. "But some people take the course and immediately begin to put the information into practice", says Taylor. "It's unusual, but it works."

The makeup of the student body shows that QWL thinking is increasingly accepted as a normal part of a pragmatic management process. John Cotter, who runs the courses, says: "In the mid-1970's, the people were mostly unsophisticated individuals who had been sent by their companies just to see what it was all about. That has changed very much. The sophistication is now very high, and it is not unusual for the people to come in groups perhaps a staff guy, a union guy, and a manager. Their interests are much more specific. Whereas before they were just examining the field, they now have usually made a decision to use socio-technical systems analysis." A third to a half of participants are line managers, vs. ten per cent a few years ago. The need for QWL work is now seen by the students to be much more pressing. Cotter says: "We used to have to explain in detail the objectives of QWL – the social pressures, the increasing education level of workers, changes in values, need for production flexibility, and so on. Now they already know all this, from events in their own companies."

Since the successful application of QWL principles almost always requires knowledge of both behavioral science and engineering, it would be useful if more ways could be found to provide the specialists in one branch with knowledge about the other — which could, among other things, facilitate the design of technology appropriate to desirable social systems, discussed above.

In the professional seminars and courses, engineers acquire the basic skills necessary to integrate a behavioural science orientation in designing the engineering aspects of production systems. It is logical to inquire why this knowledge is not more widely available in engineering schools. Louis Davis, who has taught both psychology and engineering, says: "The whole world of engineering students is bound by engineering concepts, based on classical physics; it deals only with closed systems — there is no outside world. However, when they leave school, the larger reality begins to unfold. So you can get to people after they have been on the job for a few years. Then they can relate what you're telling them to problems they see in their work, and they can be fantastic to work with."

Some of the most effective practitioners in QWL are therefore engineers, who can translate the behavioral scientists' organizational theories into operational engineering concepts. They can also, perhaps more importantly, present the ideas in acceptable terms to managers, who sometimes find the behavioral scientists' explanations excessively theoretical.

This would, in fact, be logical, but it appears to be more difficult. John Cotter says: "Engineers are never against QWL — it's just that they have never learned anything about it. But social scientists can't understand why they should learn anything about technology. They don't want to get their hands dirty. A lot of the failures have resulted from a failure of the process people to get into the technology."

Other experts have similar views. Norman Halpern of Shell Canada says: "Engineers tend to think very rigidly — they want to build the best and cheapest plant possible and then fit the people into it. But they pick up the behavioral science materials very easily. Once they identify with it, they come up with better solutions. But going the other way is not the same. There is a big push in Shell now to encourage behavioral scientists to learn something about engineering. It's not so easy."

Training on another level occurs in companies which are embarking on, or contemplating, QWL projects. This consists of instruction, usually provided by a consultant on the spot, or in a course or seminar given by one of the institutes or universities active in the field, on the theoretical principles, how they work, results at other sites, and how the theory might fit into the company in question. In North America, such courses are normally heavily participative, and participants almost invariably include representatives from top management, the union (if there is one), supervisors, and the rank-and-file. The participants are urged to give careful thought to the fit between the theoretical principles and the situation in their own company, and to make up their own minds as to the suitability of the methodology being offered.

A promising and innovative approach to training in socio-technical systems analysis and design is provided by the Ontario Quality of Working Life Centre's five-day training seminar. Participants are joint union/management teams working together in a program that emphasizes the linking of socio-technical analysis and design to the larger process of organizational change. The use of actual real life work settings is an integral component of this approach in QWL training, where cognitive inputs are combined with experiential learning.

An approach used by Lyman Ketchum is to present a number of 'assumptions' to a group of company employees, such as these:

"Man is an extension of the machine, good for doing only the things the machine cannot do. Men are unreliable and require control. Primary attention to the technological system lowers costs — and satisfying requirements of the interrelated social systems increases costs. Managers possess unique skills in leadership — other people do not" These statements are not presented as dogma, but as subjects for discussion. After several hours of discussion, managers usually concede that these are in effect the assumptions on which the company operates — a fact they are usually quite unhappy about. This forms a highly useful basis for further constructive discussion.

Further training is also often needed as the project develops and conflicts appear — training in team-building, resolution of conflicts, problem-solving, etc. In many discussions of QWL, the need for this type of more specific training may not appear to be necessary, but most QWL specialists agree it is essential to success.

QWL in the office

The task of combining technology with a human organization in an office context presents the same problems as in a factory, and in some ways they are more severe.

Socio-technical characteristics and office technology

As is the case in production systems, manufacturers of office machinery are failing to provide guidance on how the potentials of their equipment can be more completely realized through proper work organization. This is all the more surprising in the case of office equipment, since the manufacturers have become accustomed to the necessity of developing software in order to market the hardware effectively. But the software usually covers only operation of a particular piece of equipment, not of a total system in which the equipment is only a part. Some features of the human organization may be built into the equipment, but they are not always the features that QWL specialists would recommend. Robert Bostrom of the Indiana University School of Business points out: "Most key-to-disk data entry systems come with a terminal designated as a supervisor terminal... This design would create real problems for a designer trying to implement the self-maintaining team concept where the supervisor role is shared among the team and where each operator is to get direct performance feedback."

An illustrative example of technology in the office was presented at the Toronto conference by Enid Mumford of Manchester University, one of Europe's leading authorities on office technology and organization. At a unit of ICI's General Management Services, containing half a dozen secretaries, two word processors had been added without much thought being given to their use. The secretaries found them quite valuable and used them whenever possible, but in a haphazard way. Very shortly, the machines, which were supposed to save time, were creating delays, bottlenecks and frustrations among the secretaries who had to wait in line to use them. A participative process of job redesign was begun, during which the secretaries worked out a rather simple system of scheduling the use of the word processors so as to eliminate the delays, increase efficiency, enable more work to be produced, enhance the value of the secretaries to their bosses by including more administrative activities in their jobs, and improve their own job satisfaction. More importantly, the secretaries and their bosses learned much about

their organization, and managed to set into motion a learning process that will doubtless prove to be of value in the future.

One obvious alternate organizational pattern would have been to create a pool of word processor operators, carrying out only one monotonous task — which the secretaries considered and quickly rejected. But no guidance on avoiding this trap or on finding a more suitable response to the situation was supplied by the manufacturer.

A somewhat similar case is reported by Margaret Butteriss, an organizational development adviser at Shell International in London. The case refers to a 200-person department co-ordinating certain types of activities among the 1,000 operating companies in the Shell group. It receives information and queries and produces financial and other data, reports and advice to the operating companies.

The central problem was in administrative support functions, which were provided in order to facilitate the work of the approximately 130 professional staff, but which functioned so badly that the professionals spent about 20% of their time doing their own administration. A central difficulty related to word processing machines, which had been introduced with insufficient information and training, so that in effect they had merely replaced typewriters, and had generated a 50% drop in efficiency.

It had been hoped that the word processing could be co-ordinated with photocomposition done in the unit's own printing operation, but only too late was it discovered that the two types of equipment were not compatible, meaning that texts to be printed had to go through one additional costly and time-consuming step that should have been unnecessary. The poor flow of information and communications between the administrative units, inadequate training of operators, and rigid job boundaries meant that many jobs were excessively boring, workloads were uneven, delays in getting reports produced stretched out to six months, secretaries did considerable typing because of poor relations between them and the word processing unit, and much unnecessary time was spent shuffling paper back and forth. There was a general lack of teamwork, and morale was bad.

A solution was worked out by a team consisting of an outside expert, a computer expert working in the unit, and two additional employees. The support and clerical services were combined in one section, and the technical administrative services were more closely attached to the functions they served. The word processing operators were given additional training to increase their flexibility and to improve the utilization of the machines.

The case shows that advanced technology need not have positive effects; that, in fact, it can have a negative impact if introduced haphazardly. It also shows that problems can be more complicated than they appear. Butteriss says: "Looking at only a small part of a system is often a waste of time, if the larger issues are not addressed and if organization support is not given to changes."

The problem is more complex as computerization becomes more complex, and these problems are just now being attacked. Richard Walton of the Harvard Graduate Business School notes that the explosive increase in productivity of office equipment in recent years will result in more attention being paid to human considerations than was true of previous advances, because the present developments will affect more people, cross more boundaries, and will become apparent with more immediacy. Walton also feels that the human aspects will be emphasized because the low-cost increase in computer power makes it possible to select a 'less efficient' system design, and because the key is increasingly in the software: "It is now much more possible to start with the social criteria and to crank them into the system." However, most of the discoveries remain to be made. Walton says: "We now know only a fraction of what we need to know to design office systems. We are in a situation similar to what we saw in the case of factory systems in 1970."

The power game

One of the most critical, and one of the least discussed, elements in QWL is the issue of power relations. It receives insufficient attention in part because it is a delicate, highly sensitive area that touches on the nerves of managers, supervisors, and others involved in any process of organizational innovation.

Managing different types of power, a pre-requisite for QWL

For the most part, those who have preferred to see work restructuring as affecting only the persons executing the tasks in question have eventually discovered that any meaningful change brought about in one part of a system affects, whether they like it or not, other parts. What appears to be simple rejiggering of individual jobs often turns out to affect power relationships in the hierarchy. This is often unwelcome news to managers, and this is one reason why job enrichment and other forms of 'instant' organizational change have been fading. Some observers see a revival of this attitude in the growth of Japanese-style quality circles. The U.S. consultant Lyman Ketchum says: "I hope that quality circles can be a route to something better, but I'm not optimistic. That's the dream of the 'quick fix' manager – he feels he doesn't have to change. If he understands this other stuff, he knows he has to change." That is, power relationships have to change. To union leaders who have been drawn into the field, it is quite clear that a shift in management and supervisory roles is a major part of the concept, as in this definition of QWL offered by Neil Reimer of the Energy and Chemical Workers Union, Canada: "In our opinion, QWL is an effort to humanize the workplace through varying forms of worker participation, more job satisfaction, more decision-making by the worker, less supervision, development of more skills."

It would be foolish to overlook the central role of power in QWL projects. Numerous studies have shown that mental health problems, stress, and alcoholism are related to a lack of participation in decision-making, a lack of control in the work - i.e. a lack of power. When these effects on workers overflow into effects on the work, in the form of absenteeism, sabotage, slovenly work, quality defects, remedial action must be taken, and this action must inevitably relate to the power structure.

At the Toronto conference, the importance of the power question was well recognized by the participants. The only session dealing with the overall principles was conducted by Mauk Mulder of the Netherlands, author of *The Daily Power Game*, an ingenious and provocative study of reactions to power — it was one of the most popular sessions, and was repeated at the request of participants. Sessions on supervisory questions were also well attended.

The most obvious effect of QWL on the orthodox power structure is an apparent weakening of power at the top, which engenders hostility among upper-level executives who fear any disturbance of the normal pyramidal pattern. This hostility is manifested in various ways. Lyman Ketchum says: 'I see some disturbing instances of people putting QWL into practice, succeeding, and being rewarded with non-promotability in their companies.'

Increasingly, however, sophisticated managers are seeing that, if they don't hop on the bandwagon, they may miss out on some promising job opportunities. Harvey Kolodny of the University of Toronto explains the origin of the QWL orientation of Petrosar, one of Canada's larger petrochemical refineries: "The founding president of Petrosar was determined to operate the new company under a participative management style. He hired like-minded managers..." There is no doubt that top management plays a vital, life-and-death role in QWL. As we have seen, the policy laid down by Pehr Gyllenhammar, president of Volvo, has been a major factor in that company's continuing commitment to QWL.

The most friction takes place in the ranks of supervisors and middle managers, who feel squeezed between the pressures from above to conform to a new and different orthodoxy and the threat from lower-level workers who are being removed from the traditional hierarchical discipline. They begin to ask: are supervisors any longer necessary? Ernesto Poza, a U.S. consultant, says that experience suggests these fears to be justified: "Supervisors are being asked to work harder in order to make OWL work. Workers are being given opportunities for larger and more challenging jobs; but very often, when QWL programs are started, supervisors and middle managers are frozen for two to three years. The emphasis is on the workers, and the supevisor thinks, there is a top-management point of view, and a worker point of view, but I am not expected to have a point of view. Two messages the supervisor gets are: 'You supervisors were not doing such a hot job — otherwise we wouldn't need QWL' and 'We will need fewer of you in the future.' Supervisors are more demotivated than challenged by QWL." In participative organizations, supervisors are generally told that their role is increasingly that of a co-ordinator rather than a leader. But the supervisor's perception is that, whatever the system is called, if anything goes wrong, it's his fault.

It is often true that, in a participative system, fewer supervisors are needed than in a conventional system, and great care must be taken to prevent this becoming a major obstacle in the introduction of QWL.

In North America, virtually all leading OWL specialists recommend that employee participation be not only an element of a new system, but also be applied in the creation of the system. To be realistic, referring to the latter as 'participation' is in many cases stretching the meaning of the term beyond the limits of credibility. OWL specialists who have developed an extensive arsenal of organizational change techniques, one of which is the principle of participation, have become highly skilled in persuading groups of managers and/or employees that a solution worked out largely by the specialists and presented to the employees is 'their' creation. When policy statements purportedly worked out by workers in different cities, and even on different continents, turn out to be amazingly similar, even using identical wording, an outsider may understandably be skeptical of the extent of true 'participation' involved. Some specialists are somewhat less than straightforward in describing their efforts, which are often not true participation, but consultation on the specialists' own ideas. This greater accuracy of labelling would not downgrade the specialists' work, but might make the process much clearer. In view of the many areas of confusion and difficulty in OWL, it would be most constructive for specialists to use a little more candor.

In any case the participation is within fixed boundaries, fixed by management. Some of the new quality circles, for example, are strictly limited to questions of quality. It may be wondered whether the present surge in popularity of participation in North America may be abruptly reversed if some of these circles should overstep their limits.

In some other countries, participation is seen in a somewhat different light. As mentioned earlier, many unions in Europe have demanded that participation be precisely defined and guaranteed in legislation. One manifestation of this tendency is the codetermination legislation that exists in half a dozen European countries.

In applying the principles of QWL, Mulder warns against placing too much faith in the QWL expert and suggests maintaining a healthy skepticism. "Expert power," he says, "may be dangerous because the experts are limited in their views, trained to think far from reality, and have an obsession with being right — they are blindfolded against additional information."

Power is more complex than it may appear. Mulder offers this advice: "Only by understanding and using the power mechanisms can we achieve genuine participation — not by repressing the power concept, but by using it."

Final note

This report has focused on the present status of QWL and its evolution over the past ten years or so. What about the future?

Some observers believe that QWL may be a fad that will disappear with a changing public mood. This seems unlikely. It has been well recognized that there is a choice in designing organizations, and that the difference between a good and bad choice may have a heavy impact on results. The probability is that this fact will become more influential, not less. To be sure, the subject will unquestionably continue to change, as improved methodologies are developed. As Eric Trist points out, "We need to know far more than we know at present about the conditions that make for success and the conditions that make for failure. We will have to invent new change strategies for this work." Here are some general indications of where present trends may lead:

- More companies will be devoting more intensive effort to improving the quality of working life.
- Unions will increasingly see advantages in QWL, and North American unions will follow the lead of some European unions in putting pressure on managements to shape QWL efforts to suit the objectives of unions as well as managements, though the Canadian unions are more likely to be ahead of those in the U.S. The emphasis on QWL will not, however, alter the basic adversarial labourmanagement relationship.
- The QWL specialist will remain a highly skilled, and highly prized, expert, but he will be forced to add more knowledge of engineering and general management principles to his store of resources. In some European countries, behavioral scientists have had to accept a less prominent role in QWL than they perhaps should, because they have refused to adapt themselves to the needs of business and to learn the pragmatic language of managers. In North America, many behavioral scientists appear more flexible than their European counterparts and it is likely that here they will take the lead in developing and broadening the field.
- Government will take an increasing interest in QWL, and will succeed in stimulating wider interest, as has in fact occurred in the case of government efforts in the UK, France, Germany, Canada,

and other countries. They will be devoting more attention to it, taking it more seriously, and making more demands on it. The U.S. will no doubt continue to be an exception in this respect for the foreseeable future, and the diffusion of QWL will suffer accordingly.

One consequence of this will be that we will be seeing the development of broader and more sophisticated methodologies than at present are available, incorporating more considerations of engineering, architecture and finance. This will include a greater role for technology, and considerably more knowledge will be generated on various technological models that facilitate the design of more types of social systems. Without doubt more ways will be found to design continuing learning into the technology of production and office systems.







